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NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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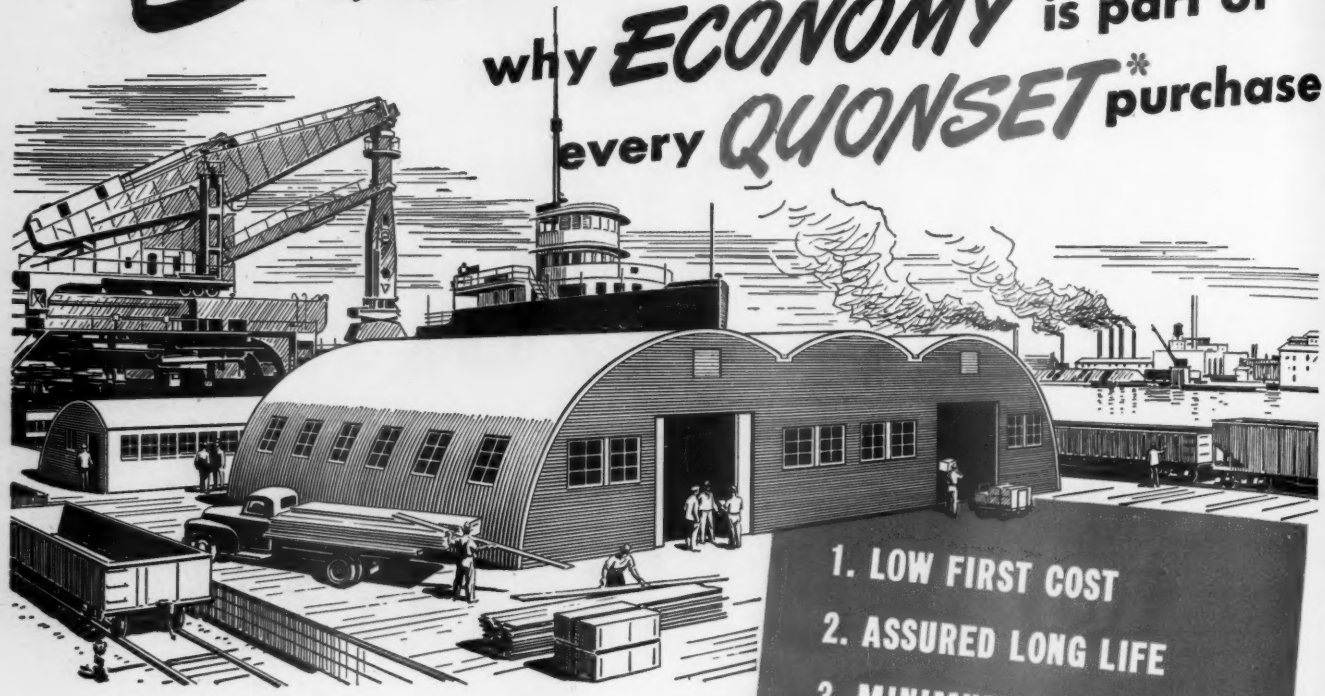

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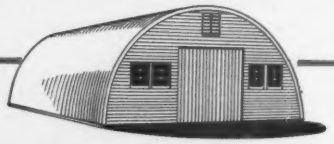

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Dual Role For Engineers Seen In Aeronautics

By T. L. K. Smull
Head, Research Coordination
National Advisory Committee for Aeronautics

A sound and vigorous American air policy is of most vital importance to you as individuals, to our country's defense, and to the world itself in its present unstable condition.. Since the advent of the long-range bomber, neither the oceans nor the Polar air-space offers protection to the continental United States that they once did.

The importance of such a policy can be measured by the fact that since last summer, some of the country's best minds have been at work on making America strong in the air. The President appointed his air policy commission to study the problem; and Congress created the Congressional aviation policy board to report on its findings. It worked independently but in close cooperation with the presidential commission.

It is with the analyses of these studies yet fresh in mind and against the highly inflammable background of world unrest that I should like to briefly paint our national aeronautical picture in broad strokes with specific reference to the part that research plays in being the foundation of air power.

Air power, as we knew it during the war, was made up of a well-balanced mechanism which utilized the great reservoirs of aeronautical research, the tremendously efficient production of our mighty aircraft industry, and the powerful striking force of a fully trained and equipped Air Force and Naval air arm. Today, only 3 years after the most terrible war the world has ever known, America has just about lost two-thirds of the triumvirate that brought our enemies to their knees.

Fortunately, aeronautical research is rapidly going forward, but our Air Force has been dangerously reduced and the aircraft industry, which supplies the material for our air arm, is in a precarious financial condition brought on by deep cut-backs in orders for military aircraft. Admittedly, it is reassuring to forge ahead in matters of research, but if the industry which develops these findings into better designed and more powerful aircraft has but few orders for planes, it cannot conceivably be ready for the rapid expansion and the high production that would be required in the event of another emergency.

Air Power Deterioration

The fact that our air forces have been dangerously reduced is readily evident. Over 14,000 bombers of the U. S. Air Force and Royal Air Force combined were used in the European Theater alone during the war. Yet today our combat strength has been reduced to 580 heavy bombers and 2300 fighters.

With military contracts greatly curtailed and with civil-aviation orders lagging so far behind the optimistic estimates made at the beginning of the post-war period, it is readily understandable that the American aircraft industry cannot remain healthy for a quick expansion which might be necessary . . . . nor can it, as an industry, even expect to maintain financial solvency unless a long-range plan can be evolved which will revitalize our Air Force for realistic national defense, and—at the same time—provide the aircraft industry with a yardstick for measuring production, financial planning, employment levels and development projects. Fortunately, it is possible for such plans to be formulated as a result of the timely and essential studies just completed by both the President's commission and the congressional board.

Meanwhile, scientific aeronautical research is vigorously forging ahead. Encouraging is the fact that NACA is at this moment rapidly stock-piling the vital aeronautical research data which will be of incalculable value to both the industry and the Air Force in the days ahead.

The fact that the United States is in a strong position in aeronautical research stems from action of the Congress 33 years ago when the United States began to realize the significance of aviation as an instrument of national defense, as well as of commerce, and to realize the necessity for the government to take an active role in fostering the development of aviation. It was then, in 1915, that Congress acted to establish the NACA as an independent agency of the government "to study the fundamental problems of flight with a view to their practical solution." The NACA, working quietly in close cooperation with the military services and the aircraft industry, has produced a host of new ideas that have resulted in American aircraft being second to none.

The most concrete evaluation of the research of the NACA lies in the fact that there is no American airplane flying today that does not embody NACA research results in its design.

NACA's Growth

The NACA has grown from its first very modest appropriation of "$5,000 a year for 5 years or so much thereof as may be necessary" to where today under the guidance of the director's office in Washington, it operates 3 large research stations: the Langley Aeronautical Laboratory at Langley Field, Virginia, devoted to aerodynamic, hydrodynamic, and structural problems; the Ames Aeronautical Laboratory at Moffett Field, California, devoted to aerodynamic problems; and the Flight Propulsion Research Laboratory located in Ohio on the Municipal Airport at Cleveland, which is devoted to research on aircraft power plants.

In addition to these 3 laboratories, the NACA operates a field station at Wallops Island, Virginia, devoted to the study of stability and control of guided missiles as well as maintaining teams of technical specialists at the Muroc Air Force Base, California, for the investigation of the problems of very high speed flight. The work of the NACA laboratories is supplemented by a contract research program being

carried on in some 40 education and scientific institutions. The value of the research facilities located at these laboratories is somewhere in excess of $100,000,000. A research staff of six thousand is now engaged in pursuing the host of problems that confront us as we near the practical operation of aircraft at supersonic speeds.

Although we feel that we are in a reasonable position with regard to aeronautical research, a brief glimpse of recent history clearly indicates that even our current efforts may be inadequate. It was the war-time policy of this country to exert its technical effort mainly to further the development and perfection of existing military aircraft that were certain to be factors in deciding the war.

This, admittedly, was a gamble. If it succeeded, the war would be shorter, the cost of success would be a sacrifice of the future for the present. It represented an exchange, at time of accomplishment, of some of the normal future dividends of research work for the more immediate rewards of intensive development of the aircraft that would be used in combat. That this policy was a good one and hence justified is implicit in its results. The war was won on this basis.

However, because aeronautical research had in effect been abandoned for the duration of the war and aeronautical development had been intensified and accelerated, by the application of research teams and research facilities to the function of development, the end of the war found our reserves of new aeronautical knowledge that in normal times awaits application almost entirely depleted. The barrel of new information was scraped dry. For security reasons recognizing the dependence of national defense on the state of technical advances, we are now intensively engaged in replenishing our store of new knowledge on the ever-advancing technical frontiers.

Effect of Jets

The practical attainment of jet propulsion during the war further confronted the aeronautical engineer with a tremendous field of new problems. Flight at supersonic speeds, made possible with jet propulsion, projected the scientist into a literally unknown region.

The rapid advancement in aviation since the Wright Brothers first took to the air in 1903 is the result of two factors. First, the commercial airliner of today, while radically different in appearance, is basically the same airplane that first carried Orville aloft. The three basic elements of the airplane, the configuration, the method of control, and the method of propulsion of the modern transport airplane represent merely the refinement of the basic features of the Wright bi-plane. Jet propulsion is the first radical change in one of the elements of the airplane since its inception.

The second factor which permitted the rapid progress of aviation is the unique nature of the type of airflow which the airplane has encountered. The limitations inherent with the use of the propeller as the propulsion element have been such that the airplane has been limited, up to now, to flight at speeds less than the speed of sound. As a result, it was necessary for the aerodynamicist to investigate and assimilate only one type of airflow, that in which the air was generally considered to be incompressible.

Jet propulsion not only opened new avenues of research on aircraft propulsion systems, but also makes possible flight at supersonic speeds. Flight at these speeds brings a multiplicity of new and vastly complex problems. In both transonic and supersonic airflows, the compressible nature of air is a prime consideration. It can neither be neglected nor accounted for by simple corrections to incompressible flow theory. The principles governing supersonic airflows, although as yet not well understood, are radically different from those governing subsonic flows.

It has been noted that jet propulsion represents a change in one of the three basic elements of the airplane. What changes will be made in the other two basic elements, the configuration and the method of control, if we are to achieve safe flight at supersonic speeds for man-carrying aircraft, are still largely conjectural and represent the problems that must be solved before we realize safe flight at supersonic speeds.

Intensive research over the past several years has given us some clues as to what the airplane of tomorrow will look like. There is every indication at present that the wings will be swept back even to the point where the airplane will resemble an arrowhead. Even less is known of the means by which the airplane of tomorrow will be controlled to insure safe flight. There is every indication that control by use of the ailerons and tail surfaces of the conventional airplane will be inadequate or at least will have to be appreciably modified.

There is an old aeronautical adage that says "you can fly a barn door if you put enough power on it." Al-

About the Author

This month's American Engineer spotlights aviation and the engineers' role in the growing form of transportation.

Heading up contributors is T. L. K. Smull, head of research coordination for the National Advisory Committee for Aeronautics and son of a member of Ohio's Board of Registration, Dr. Thomas J. Smull, dean emeritus of Ohio Northern University. In the article, he not only tells what the engineer has done and is doing in advancing aviation, but what he must do as a citizen.

On following pages, you'll find a discussion of engineering aspects of the Federal Airport Aid Program being administered by CAA. Its author is D. W. Rentzell, who June 1 was named administrator of CAA. You'll also learn, in an article by Francis W. Brown, chief hearing examiner of CAB, how the Civil Aeronautics Board uses the same thoroughness of technique that goes into engineering in protecting, fostering and regulating American civil air transportation.

Picture and word coverage of both the D. C. Society and Massachusetts Society annual meetings also are included in this issue.

though a crude statement, it is a clue to the possibility of being able to fly at supersonic speeds.

While the engineering problems confronting us are many and are complex, and are at the moment of tremendous military significance, the high-speed research that is applicable to the military aircraft today is research on the civil aviation problems of tomorrow. While it may be noted that there is an apparent divergence between the developments of military and civil aircraft, the basic scientific research applies to both. Military development has often borne the brunt of the cost and effort of pioneering high performance and development of new power plants, yet civil development contributes greatly to military aviation as regards reliability, safety, comfort, economy and operational practices.

Thus although we are all interested in the higher performance aircraft of tomorrow, the public's most direct interest is more generally concerned with the problems confronting commercial aviation today, and what can be done to improve our present civil transport type aircraft. Civil aviation must be built on safety, certainty and economy. These three factors are deeply interwoven and improvements in any one of these factors directly affects the others.

Many of the results that have been obtained from high speed research will be applied to civil aircraft, in particular the application of jet propulsion to transport aircraft. However, it will be sometime before you can drive to the airport and board a jet-propelled transport, as the reliability and fuel economy of jet engines have not yet reached the refined state of development required for airline operation. On the other hand, the turbine-driven propeller engine seems almost certain to at least supplement or even replace the reciprocating engine within the foreseeable future.

The principle ills of commercial aviation are not found in the airplane itself, as information is already available that will permit us to build faster, bigger, and improved civil transport aircraft if a real need for them exists.

Ills Outlined

The most satisfying thing that can be told a passenger is that he will arrive on time. Unfortunately, under present circumstances our commercial airlines can say that only about 45 percent of the time. Regularity of all-weather commercial service is the single most important objective we must all try to achieve in civil aviation. Today the airway system of the country is in many places near the saturation point.

This problem of improving the high ways of the air, while of tremendous significance to civil aviation, assumes increased importance when we realize that civil and military aviation may no longer be considered separately because air transport is as vital to our national security as fighter and bomber aircraft. Should we be suddenly projected into another war, our air transport system would be of even greater value than at the time of Pearl Harbor.

In spite of the many problems of peace-time conversion, the air transport picture is improved as compared with its pre-war condition. Today, we have about 1000 scheduled transport planes in service with over 60 all-cargo planes. There are 765 Class IV airports or larger throughout the country; 96,000 miles of domestic routes and 175,000 miles of international runs are being flown by the airlines. Although, by comparison, we have the most extensive and the most efficient system of scheduled air transport in the world, it must be improved in the interest of national security.

Here is where you can do *your* part in building American strength in the air. Civil aviation must have public support . . . not only financial but also in the form of sympathetic understanding of the problems facing the carriers today and a public appreciation of their utility for defense.

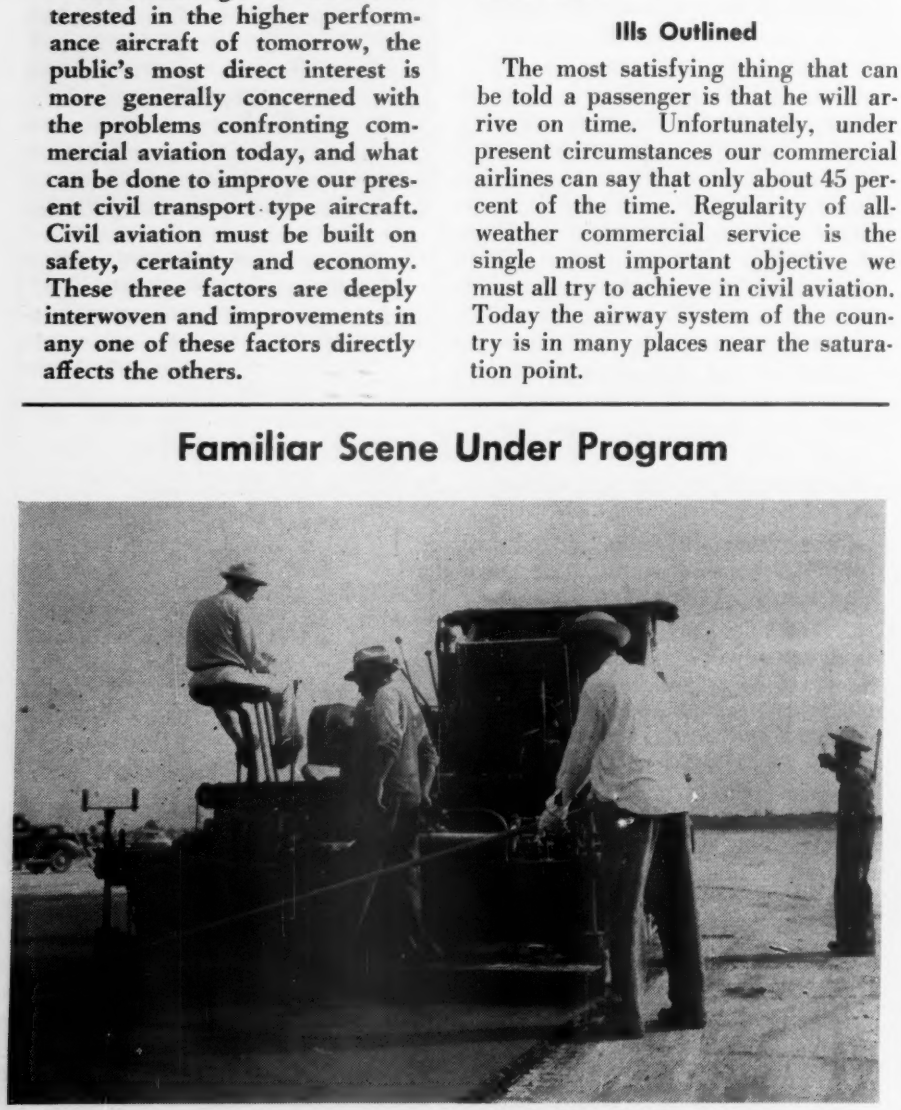
You engineers by virtue of your professional status, are in a position to assume leadership in your communities and can direct and influence constructive public thought on the support of a strong civil aviation program.

How to Help

You are asking yourself, "What can I do?" Let me give you an example of but one problem which faces many communities and air carriers. With improved airplanes of greater size, speed and weight, many airports—which, five years ago, gave promise of being entirely adequate—will soon be unable to handle the increased traffic, gross weights, and take-off requirements of today's aircraft . . . much-less tomorrow's. Communities which are reluctant to interest themselves in improving existing airport facilities—or to build new fields—not only deprive their commercial enterprises and citizens of air-linkage between other centers but contribute materially—and perhaps unconsciously—to a deteriora-

(Continued on Page 6)

Familiar Scene Under Program



A familiar scene at hundreds of airports across the nation these days is blacktopping of runways as part of the Federal Airport Aid Program. As the program continues to expand, such scenes will become even more common.

Airport Development Work Of Engineers Outlined

D. W. Rentzel
Administrator of Civil Aeronautics

Much has been written about the Civil Aeronautics Administration's Federal Aid Airport program—of how it is helping cities and towns in building airports —of how this program will help solve the existing need for a well distributed system of airports throughout the country.

All this is true. The program is in full swing with over 300 communities now participating to the extent of matching federal funds of over $30,000,000. Hundreds more units of local government are eligible for federal aid when they have submitted the necessary engineering data and specifications. Others will become eligible as the program continues.

Not so much, however, has been written of what actually goes into an airport as constructed under the Federal Airport program. Many people think of an airport in terms of dollar cost—others in the light of the vast amount of planning involved. Both planning and cost, of course, are of the utmost importance as it certainly takes long and careful advanced planning and large sums of money to build a modern airport. There is, however, another item of equal importance in the construction of an airport under the aid program—that of engineering.

Engineering, in one form or another, makes up most of the duties of the CAA's Office of Airports and the local communities participating in the program utilize their own engineering departments or in many cases hire engineering firms to do the initial work. Extensive engineering work remains to be done once a project is approved.

Following a typical project up through the various channels from the time a municipality is eligible for federal aid, it is almost entirely in the hands of engineers. First the project sponsor prepares a project application which contains blueprints and drawings, detailed specifications and an estimate of cost. It is forwarded to the CAA District office for review by the district engineer, who also makes a recommendation to the CAA Regional office.

District CAA engineers work with communities in choice of sites for airports and in drawing up the necessary plans and specifications. Regional engineers are also available to give whatever engineering aid possible to cities participating in the program. An airport advisory service in Washington exists for the purpose of providing overall assistance to both sponsors and CAA field engineers.

Engineer Background

When the first funds for work under the Federal Airport Act became available in July, 1946, the sum of $3,000,000 was included for a survey in the light of the anticipated expansion of civil aviation in the country. This initial job was for CAA engineers who were sent into the field to determine, from a standpoint of aeronautical necessity, where fields should be built under the first year of the program.

With $500,000,000 authorized by the Congress for construction over the seven-year life of the program, the CAA was forced to form a well-rounded engineering staff with specialists in a wide variety of fields. Some were already available with all the experience gained in the Defense Landing Area and Development of Civil Landing Area programs undertaken by the CAA before and during the war. Others had to be recruited for the task ahead. This proved a difficult problem in view of the small number of available men trained in airport construction. Releases from the armed services helped to a great extent and at the present the CAA has an engineering force of approximately 300 to handle the program.

Organization of the CAA engineering staff locates civil, electrical, paving, architectual and turfing engineers in the Washington Office of Airports. Each of these types are also represented in the nine CAA Regional offices while a civil engineer is generally located at the District office level. In addition each Regional office has roving engineers available for specialized jobs in the districts making up the Region.

Following review by regional engineers, the project is given approval from where it is sent to the Washington office for post-review. Only in very few cases is the decision of the regional engineers changed by the Washington office. The work in Washington is basically one of setting of engineering standards to be followed and the application of such standards to the various projects.

An important function of the Washington engineering staff is to collect all available data on the latest engineer-

New CAA Administrator

Story behind the Federal Airport Aid Program is told by Delos W. Rentzel, sworn in June 1 as new administrator of the Civil Aeronautics Administration.

A 39-year-old native of Texas, Rentzel got his start in aviation as a radio operator for American Airways back in 1931, eventually became director of communications for American. At the time of his appointment, he was president of Aeronautical Radio, Inc., which operates 431 radio stations in the U. S. serving aircraft operators.

ing methods in airport construction and relay the information down to the Regional and District offices and to the project sponsors. The CAA has ready access to large quantities of late data on construction and design. The Army and Navy, state highway departments, Public Roads Administration and Department of Agriculture have all cooperated in supplying all available information on airport construction. Research conducted by the Army and Navy and the experience gained by the Armed Services in airport construction during the war have been of tremendous help in the two years of the present CAA construction program.

Typical Examples

What about the airport program itself? A wide variety of difficult engineering jobs are being undertaken in the construction program at the present time while many others are still on the drawing boards.

An excellent example is the work to be done at LaGuardia Field. LaGuardia is slowly sinking into the water that surrounds it. The CAA has approved and will participate in seeking to remedy this condition by the use of vertical sand drains. These vertical sand drains are used where the soil is saturated with water.

To combat sinking, holes will be drilled into the ground at selected locations and pipes sunk. The pipes will be filled with sand and later withdrawn leaving the vertical drains. This forces the water in the saturated soil to drain upward where it is carried off through the cinder base.

California, to cite another example, has several large engineering projects in the building program. At San Francisco, a large earth moving job is contemplated while at Los Angeles the installation of the first FIDO fog dispersal system to be put in at a commercial airport is scheduled. Seattle will have a new two and a half-million dollar terminal building constructed.

The largest single project to date in which CAA will participate is at Chicago Orchard airport where the city of Chicago has undertaken a tremendous engineering project. The CAA has approved the master plan for the enlargement of the field which includes relocating several highways, a railroad, a new terminal building of new design, and a new runway layout which when completed is expected to be ready to handle the largest volume of passengers and traffic of any airport in the country.

The field will be the largest civilian field in the country by area and will occupy over 6,000 acres. When completed it is expected to cost in the vicinity of $75,000,000.

Design Features

When completed the field will boast of ten 8,400 foot runways built at a tangent like wheel spokes from the terminal building. A 500-foot apron will surround the terminal building, which will be on two levels, a transportation level on the same plane as the flying field and a passenger level one story above. Attached to the teriminal building will be five split-finger ramps which will contain the loading stations, airline stations and passenger platforms. These ramps will also be two stories high. Parking space will be available for 6,500 cars and will feature separate provisions for trucks, taxis and private automobiles.

Full development of the master plan will see loading positions and facilities to handle 360 plane movements per peak hour. In the first two years of the federal aid program, the CAA has allocated $2,600,000 for initial work on the field. Another $2,000,000 is tentatively allocated for fiscal year 1949. For the same period, Chicago has allocated $7,700,000 for its share of the work. There is no way to determine exactly how much federal money will be allocated for the project as appropriations for the federal aid program are made on a yearly basis.

The propects mentioned are just some of the engineering jobs involved in airport construction. As we progress in the art of airport building, it is certain that many more difficult engineering feats are ahead. Meanwhile, we must keep up with the times so that we will be able to keep our building program at least on a par with the development of our civil aviation.

Smull

(Continued from Page 4)

tion of the air transport system which must be kept strong for defense.

The Federal Airport Act authorizes $500,000,000 to be spent within the next seven years for airport improvement and construction, provided the sum allocated to any one community is matched by an equal amount. Surely, an opportunity for civic advancement and the premium on a defense insurance-policy of half price should merit the support of any thinking citizenry.

Another point which frequently requires intelligent consideration is the need for public support in developing the airways for scheduled air transport. Improving airways to permit regularity of all-weather operation is the most important problem facing civil aviation. There are, unfortunately, those who decry the advancement and progress of the air carriers, saying that such a drain on public funds should not exist.

In this regard it is well to review the dividends that have resulted from public support in the past. Since 1931, it has been estimated that the total of public aid to airline operation from all sources amounts to about 229 million dollars. It is interesting to examine what the public has bought with this sum. They have purchased a full-fledged air mail system, with all of its convenience and advantages; they have purchased an efficient, fast and comfortable system of passenger transport; they have purchased a system for the fast transportation of cargo; and, most important of all, they have bought the means of insuring that there will be a strong, adequate and effective transport system available to the armed services at all times and on instant notice.

It is imperative that a soundness prevail in the airlines from not only the defense standpoint but from an economic position as well. Certainly a self-sustaining, competitive and profit-making airline industry is—for the taxpayer—cheaper, sounder and far more advantageous than government subsidization. In short, good business principles dictate that every citizen and taxpayer must work for a strong and expandable air transport system . . . for not only national security but for the commercial expansion which is the foundation of a healthy and sound national economy.

If there is any one impression which I am anxious for you to retain, it is a further realization that our Nation's security and future welfare lies in the air. A sound American air policy is the key to the strength of national security; it can likewise serve all of us as the tool for shaping commercial development in a peaceful world. The Nation's research facilities, its aircraft industry, its military services and its air-transport system are all working toward this end. A public understanding of the value of this integrated effort is necessary.

CAB Employs Exacting Techniques In Determining Route Cases

By Francis W. Brown
Chief Hearing Examiner
Civil Aeronautics Board

Precisely the same thoroughness of technique that marks the work of any professional engineer is used by the Civil Aeronautics Board in determining airline service and routes.

Getting air service for a community isn't just a case of an air carrier deciding that it wants to serve a town and the local Chamber of Commerce certifying the service is welcome; any more than building a bridge can be done by just deciding the structure is necessary and hiring a crew to put the footings and steelwork in place. The in-between step in the case of the bridge is the engineer's entrance into the picture to do the over-all planning. Similarly, CAB serves as the "engineer" of civil aviation development.

CAB is (literally speaking) charged by law with "studying all the angles" in protection, regulation and fostering of American air transport, just as must the engineer study every conceivable element in his work. The agency is made up of five members appointed by the President, under terms of the Civil Aeronautics Act of 1938, and is endowed with legislative, judicial and regulatory powers over civil aviation.

That act ended the wildcat days of aviation when all you needed to start an airline was a few down-payments on two or three cabin aircraft and inaugural of "scheduled" flights between Kalamazoo and Slippery Rock. A few months (or maybe a year at the most) later, the sudden appearance of the finance company promptly ended the airline. Usually, airline operators would wake up to find that their economic throats had been cut by a fast merger or piratical duplication of service. Without revenue to maintain the payments, the airline went to the wall.

Civil aviation transportation has gone through three main stages since it first began to attract serious attention back in 1926. At first, the government's interest in aviation was predicated on improving the air mail routes. For nine years, until late in 1935, that was the main concern. But by 1936, the record began to indicate that mail loads were becoming relatively more stable and that a tremendous rise in passenger volume was under way. The emphasis immediately switched to passenger transportation. Since the end of the war, there has been still another change, as cargo and national defense factors increased in importance.

Defense Insurance

The mail subsidy given the airlines by the government has become national defense insurance. For it is that subsidy which has kept the civil air transport system of the Nation functioning. With the exception of the war years, the history of the commercial air carriers has been one of financial difficulty. In 1947, only four of the 16 trunk air carriers showed a profit, and only one—Eastern—made a substantial profit.

The financial plight of the airlines has meant that Civil Aeronautics Board has had to take broad economic regulatory steps on behalf of the air transportation industry. Its primary job has been in issuing certificates of convenience and necessity authorizing air transportation over new routes and fixing the compensation to be paid air carriers for carrying mail. Additional economic functions of the CAB include the power to regulate tariffs and tariff practices, to regulate rates for carriage of persons and property, and to require and prescribe the form of accounts, records and reports maintained by air carriers.

The agency also has the power to approve or disapprove interlocking relationships, consolidations, mergers and certain agreements entered into by the carriers.

Obtaining a certificate of convenience and necessity is no small job. The process starts when an air carrier files an application with CAB for an authorization to serve a given community, an area or points along a specified route. The application identifies each route desired—each terminal and intermediate point is listed, type (mail, passenger and property) of service and whether services are to be rendered in scheduled operations. Type of aircraft proposed for use also must be stated, as well as any possible connection applicant may have with any other form of transportation or with any aeronautical activity.

Following filing of the application, a docket number is assigned and a pre-hearing conference is held by one or more of CAB's trial examiners. A public counsel is named to represent the public interest. In nearly every case, several other interested parties also will want to be heard and at the pre-hearing conference procedural agreements are reached, detailed summaries of the evidence to be presented and witnesses to be called are made public. A future date for exchange of exhibits also is set at the hearing, with the exchange making possible advance preparation for cross-examination at the formal hearing to follow.

The exhibits usually contain the complete argument of the applicant in addition to statistical and other supporting data. Usually the exhibit contains extensive and complete information about the characteristics of cities along the proposed route, and those of other cities within a 25-mile radius will prove valuable. In addition to population, type of manufacturing plants, value of material produced, yearly value of manufacture, size of payrolls and presence of any military establishments, the exhibits show the number of telephones used in the cities, the number of income tax returns filed, volume of retail sales, amount of incoming and

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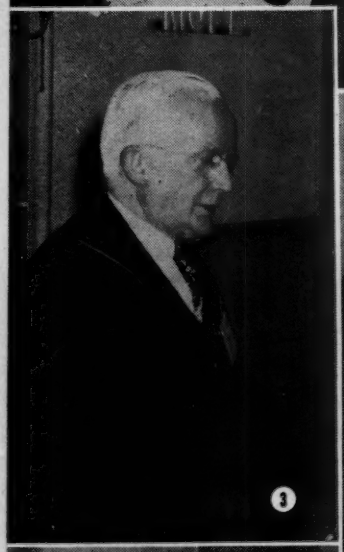

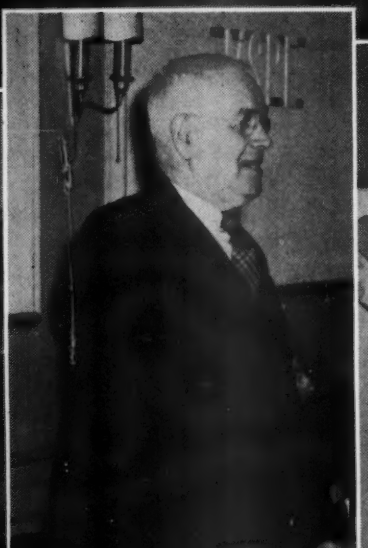

Massachusetts Tenth Annual Meeting Draws Heavy Attendance

Massachusetts Society's tenth annual and most successful meeting—held at Hotel Commander in Cambridge—drew heavy attendance of professional engineers from throughout the Bay state.

From the time the "get acquainted half hour" got underway at 6:30 p.m. until the drawing of door prizes and social hour signalled the end of the evening's festivities, the annual meeting program was fast moving. Members and their guests heard Harry A. Winne, vice president of General Electric, tell "What Industry Thinks of the Professional Engineer"; partook of a sumptious banquet; joined in a program of community singing; received news of the state unit's new slate of officers for 1948-1949; gave special recognition to the committee which planned the meeting; posed for a series of pictures taken by H. G. Wiest Jr., a member of the North Shore Chapter, for publication in the American Engineer; and heard that MSPE is continuing its growth.

Host for the meeting was the North Shore Chapter, and the arrangements were handled by a committee headed by C. P. Hall and including as members E. A. Harty, N. B. Mitchell, E. E. Lynch, H. T. Wrobel, R. E. Wiggin, J. W. Apperson and P. H. Wilson.

As MSPE Met

The quick lens of a camera wielded by H. G. Wiest Jr., member of the North Shore Chapter, produced these pictures (opposite page) of the Massachusetts Society's annual meeting.

Shown in the photographs are: 1 and 2. groups of delegates to the meeting. 3. NSPE Vice President William F. Ryan, master of ceremonies for the meeting. 4. MSPE officers for the coming year are (front row) E. A. Harty, S. Lewiton, F. S. Bacon and E. L. Blair; and (back row) R. C. Newton, P. J. Equi, J. J. Loustaunau and F. B. Haeussler. 5. L. Morton Reed, vice president of the Connecticut Society and eastern zone director of the NSPE Membership Committee, speaks. 6. H. A. Winne, vice president of General Electric, delivers the principal address. 7. David Chapman, a member of the State Board of Registration, reports to his fellow MSPE members. 8. With the aid of an accordianist, C. P. Hall of North Shore Chapter leads community singing. 9. Awarding of a door prize brought smiles to the face of this unidentified gentleman. 10. The guest speaker wasn't neglected when it came to handing out door prizes—H. A. Winne receives his package from E. A. Harty and I. F. Kinnard.

Stresses Engineer Importance

Winne, declaring industry and engineering to be "indivisible", pointed out at the outset that engineering is the very foundation of today's industry—without it, industry could not have reached its present level and should it lose engineering now, industry could not function or make use of its products possible.

He expressed belief that the ever-increasing importance of the engineers' contributions to our material well-being lies in the impact of technology upon our everyday lives, not in efforts to split the atom, achieve supersonic speeds and establishing communications with the moon. He prefers to think the importance lies in better lighting for millions of pairs of eyes; more power to turn the wheels that once bent human backs and gnarled hands; new and improved homes built with less effort and in a shorter time and equipped with all types of labor saving devices; greater production efficiency and higher output per man hour, with resultant greater production of goods and lower prices.

Even after work in those areas is completed, he asserted, the engineers' world will continue to expand. But not all, and perhaps not the most important of the engineers' opportunities are not technological, he cautioned, calling at the same time for greater engineering effort in working out the solution of many social, economic and political problems confronting the world. The world is crying for application by the engineer of his kind of thought and analysis in the social and political field on a community, state, national and international scale, he explained.

Social Responsibilities

The engineer's qualifications, at the same time, he added, place upon him a heavy and solemn responsibility to do more than just fulfill the technical functions. The world is astonished if a bridge built by an engineer collapses, whereas the structure of society—which the engineer can take steps to strengthen—is allowed by the engineer to become shaky and unstable. While admitting that the engineer is meeting his technical responsibilities to the fullest degree, Winne criticized the engineers for failing to meet their social obligations with the same singleness of purpose.

The General Electric official outlined a series of fields in which he thought NSPE could serve most effectively: 1. working for improvement and uniformity of state licensing laws; 2). working for improvement of building codes and regulations; 3). educating the public as to the dangers of atomic warfare and necessity for international control of atomic weapons; 4). development of professional interest in young engineers; 5). being a constructive influence on standards of character, ethics and ability in the profession; and 6). serving as a society representative of the entire profession, making possible expression and integration of opinion of the profession in a single, authoritative voice.

Named to head MSPE in the coming year were F. S. Bacon, president; John J. Loustaunau, 1st vice president; Frederick B. Haeussler, 2nd vice president; Samuel Lewiton, secretary; Ernest L. Blair, treasurer; Raymond C. Newton, national director; Peter J. Equi and Bertrand V. Giegerich, directors; and Edgar A. Harty, alternate national director. Bacon, reporting for the last time as vice president of MSPE, reported that in its tenth year the

(Continued on Page 17)

Steinman Issues Impassioned Unity Plea For Profession at D. C. Meeting

"Men may kill and maim for a time, but they can build forever."

"Of all the professions, engineering has been the most backward in obtaining public appreciation and recognition."

"Other groups have long since learned that protecting the profession is more important than the practice itself."

"No other legally authorized profession tolerates the unauthorized misappropriation of its name. Our vehicle looks inviting to those hosts of uninvited hitchhikers, but they are damaging our profession."

"Engineers must be recognizable before they can be recognized as a profession."

"We have successively split, divided and subdivided our profession until we are stressing the features that divide us rather than the fact that we are a single profession. No other profession has broken itself up into so many parts, preventing integrated, united effort in behalf of professional problems."

Thus did Dr. David B. Steinman, internationally known engineer-bridge builder, author and educator, outline his views on the tremendous job ahead for the profession to the annual meeting of the District of Columbia Society in Washington.

Recounting at the outset of his talk that the United States won the war "by accomplishing miracles in the race of production" after calling upon the engineering know-how at its command, Dr. Steinman declared flatly "the engineer won the war and has received too little credit for his work." Success in any future war, he predicted, would go to the nation that best utilizes its engineering ability to the fullest extent.

Four-Point Program

He outlined a four-point program designed for protecting the profession, a program which embraces legislation, improved public relations and publicity, checkup and enforcement. But he warned that one of the first major jobs of the profession is to unify itself. Time and time again, he reported, engineers themselves have blocked the progress of the profession either by inaction or inability to agree on a course of action.

Commenting that "we are not organized as a profession to take care of our own professional interests," the NSPE founder and first president called upon engineers to profit by the example of other professions and launch an extensive public relations campaign to educate the public to the engineers' importance. The public must be brought to realize, he declared, that the engineer epitomizes constructive vision and economic progress.

It is an established principle that a profession, to be truly recognized as a profession, must be defined, Dr. Steinman continued. The "fringe of ignorance, confusion and self-designation" must be eliminated; a single, unequivocal procedure for drawing the line of demarcation between engineers and non-engineers is the primary essential.

"Professional registration, under statutory authority now established in all of our 48 states, now defines the profession," Dr. Steinman declared. "It supersedes all prior and conflicting methods of indicating or claiming professional status. We have now established—in the same manner as the older established and recognized professions of medicine and law did before us—a clear-cut, unequivocal answer to the question 'Who is an engineer?'

"Legal registration is the sole line of demarcation having the sanction and authority of the law. Under the laws of all 48 states, professional registration is the sole answer. Professional status cannot be purchased by joining any society, council or club of engineers. Nor can professional status be self-conferred—by an individual or any group or association of individuals."

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District Meet Pictured

Annual meeting of District of Columbia Society resulted in the photographs on the opposite page.

1. Four engineers employed by the National Bureau of Standards shake hands after agreeing that membership in the D. C. Society and NSPE holds something for them—R. H. Freyeisen, L. M. Tomlison, George Hall and Edwin Janke Sr. 2. Among top officers announced for the year are John J. Rockefeller, president; Melville L. Brown, 1st vice president; Herman F. Lame, national director; and Joseph H. Powers, director. 3. A general view of the crowd present during the pre-dinner cocktail hour. In the foreground (glass in hand) is V. B. Smith, new Washington associate editor of Engineering News Record, talking shop with one of the guests. 4. With characteristic vigor, Dr. D. B. Steinman drives home a point during his address. 5. Only woman member of the District of Columbia Society is Mrs. Hilda C. Edgecomb, a graduate of the University of Colorado, registered in the state of Missouri and in Washington for the past 2½ years with the Rural Electrification Administration.

6. Getting a membership sales talk before the dinner is L. M. Tomlison of the Bureau of Standards. The distaff side sales force includes Mrs. Edward Janke Sr., Miss Dorothy K. Freyeisen and Mrs. R. H. Freyeisen. 7. Major Philip N. Vassil, Army Signal Corps, shells out his price of admission to J. H. Powers of the D. C. Society. 8. The speakers' table group included Edwin Marechal Woods, Ernest Kautt, C. Warren Bogan, Dr. Steinman, Retiring President Herbert Manuccia and Toastmaster James J. Bowe. 9. All is smiles when two former NSPE presidents and the retiring president of the D. C. Society get together—right to left, Herbert Manuccia, Dr. Steinman and Col. Walter Simpson. The latter two are the ex-NSPE heads. 10. Professor Bowe recounts the boundary line story told elsewhere in this issue.

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Hits Defamers

Lashing out at those who attempt to classify professional engineers as "just another breed of cats," Dr. Steinman declared that the term "professional engineer" is all-inclusive and also exclusive—excluding all non-engineers, pseudo-engineers, affiliates, those on the non-professional or sub-professional fringe and all who have not qualified. As for the argument that there are two kinds of engineers (those who need to be registered and those who don't), he insisted that no exemption in any registration law makes a man an engineer. Such exemptions, he continued, merely state that under certain conditions a non-engineer may do some of the things that engineers do; they do not vouch for the non-registrant's qualifications, they disclaim responsibility and do not authorize the non-registrant to consider himself an engineer.

Dr. Steinman lauded NSPE for its refusal to "give" professional status to members, pointing out that the Society requires that status be obtained as a preliminary to membership. He recounted that he belongs to 43 of the more than 90 engineering groups that exist in the nation, but declared he placed "my loyalty first with the welfare of the profession."

He asked members of the D. C. Society to "proclaim NSPE principles until those who now scoff eventually come to pray," adding a warning against "making friends by apologizing for our principles."

Declaring he and many others had devoted a good share of their lives to building a "defined, integrated and unified profession," Dr. Steinman pointed out the need for a common organization to unite all segments of the profession, one dedicated to integration of the profession and lifting it by its bootstraps to a higher point in public esteem. He described NSPE as the "most altruistic organization I know in the profession." He predicted, in conclusion, that the Society's efforts would bring "a priceless dividend."

The meeting, a dinnner event at the Willard Hotel, drew more than 100 persons. Toastmaster for the occasion was Professor James J. Bowe, a past president of the D. C. Society.

A Point Of Order

Top yarn of the District of Columbia Society's annual meeting came from Toastmaster James J. Bowe.

It concerned a fence built to separate the domains of Heaven and Hell. Each New Years day, the fence would be found to be knocked down. The Lord had to call upon his bountiful supply of engineers to erect it again each year. Finally, the Lord and the Devil agreed to share the fence rebuilding chore, each to have the job done on a rotating basis.

The first year when the fence was knocked down, the engineers of Heaven put it back up. But the second year, the fence stayed down for several days before the Devil was summoned to explain his failure to live up to the agreement. He didn't intend to put the fence back up at all, he finally admitted—the engineer shortage was too critical in his domain.

"We'll sue to make you live up to the agreement," the Devil was told.

"And where," he shot back, "will You get any lawyers?"

ECA Takes NSPE Offer With "Sincere Thanks"

Economic Cooperation Administration has pledged itself to call upon NSPE "whenever necessary" for assistance in carrying out the European Recovery Program.

A letter from S. D. Richards, special assistant to the administrator, to Executive Director Paul H. Robbins carries that pledge. Declaring that Paul H. Hoffman, ECA administrator, desires to express his "sincere thanks" to members of NSPE for offering the services of its members in carrying out ERP, Richards declares that success of the program will depend in large measure upon the caliber of personnel recruited to perform the complicated task that lies ahead.

Services of professional engineers "undoubtedly" will be required under the program, both here and abroad, his letter says, and NSPE's offer of its services has been "placed in the hands of those individuals who will be most interested in the type of services that can be performed by members of your organization.

"We are gratified to know that we have complete backing of your organization," the letter concludes, "as is evidenced by the resolution adopted at Buffalo."

NSPE Staffer Honored

It's now Milton F. Lunch, LL.B. Lunch, NSPE legislative analyst and executive assistant, received his Bachelor of Laws degree June 4 at the 79th annual graduation ceremony of National University. With his degree, the Washington staff member received a number of honors, including selection as one of three members of his class to be honored by membership in the university's honor society; received highest recognition for three of the courses in his curriculum in the last year; and captured the Bureau of National Affairs prize awarded to the graduating student thought most meritorious by the faculty. Lunch, incidentally, won admission to the bar one year before graduation by passing bar entrance exams while still a junior in his law course.

Chicago Convention Committee Heads Named

Committee chieftans whose job it will be to make NSPE's 1948 annual convention "the best yet" have been named by the executive committee of Illinois Society.

V. E. Gunlock has been appointed general chairman for the convention, to be held at Hotel Sherman in Chicago December 16 and 17. Co-chairman is George DeMent, and heading up other committees will be W. W. Wallace, house; D. M. Campbell, finance; D. S. Magowan, attendance; F. W. Speidel, registration; C. A. Walls, ladies; and R. A. Lonier, general committee secretary.

Around The Nation

With Our Members

Two important NSPE committees—Executive and Constitution and By-Laws—met in Washington in mid-June to wrestle with weighty problems facing the Society.

Constitution and By-Laws Committee, headed by Minnesota's S. L. Stolte, launched its study—requested by the Committee on Problems of the Young Engineer headed by William Ryan—into possible ways of admitting engineers-in-training into national membership. It also began its study of the need for revision of the NSPE constitution and by-laws (with indications that several new amendments to the constitution are in prospect and complete redrafting of the by-laws may be needed).

The committee also debated need for inclusion of five special committees — Constitution and By-Laws, Problems of the Young Engineer, Employment Practices, Inter-Society Relations and Military Affairs—as regular committees, and reviewed and tabulated in greater detail the duties of all standing committees. Mandate of the board that a new committee on Registration be setup also drew study by the committee.

From the Executive Committee came a recommendation to the board of directors that the NSPE administrative year be changed from the present calendar year to a July 1-June 30 basis. The subject will come before the board at its meeting in Oklahoma City in September, and if approved then will be submitted to the membership for balloting as a constitutional amendment.

Under the plan, officers would be elected at least three months prior to the start of the administrative year, and the date of the annual meeting also would be changed.

Other Actions

The Executive Committee also asked the Public Relations Committee to submit to the Board for its September meeting recommended uses for the new NSPE insignia; ordered renewal of NSPE's efforts to get a national department of public works, with cabinet status, established; voted down a suggestion of the Michigan Society that the name of the American Engineer be changed; held that establishment of a personnel service at the national level was not practical at this time for financial reasons and because of the effectiveness of the work of state societies in such efforts; turned down a suggestion that NSPE prepare a compendium of registration laws immediately, but ordered a poll of member state societies to determine whether they would purchase such a service at nominal cost.

The Executive Committee also:

Revised the NSPE budget to add $7,500 necessary to pay the expenses of directors to board meetings, eliminating the $5,000 that was to have been added to the reserve fund this year. The reserve fund now contains $10,000.

Recommended to the Constitution and By-Laws Committee that a minimum of 20 members in good standing be required of a state society retaining affiliation with the National Society.

Agreed that the American Engineer should be sent to any member of a member state society or chapter but not holding membership in NSPE, upon payment of the member subscription price.

Appropriated an additional $750 for printing of up to 15,000 more membership brochures when needed.

Purchased a wire recorder to be used in transcribing meetings of the Society.

NSPE Defends Professional Clauses in T-H Statute

An attack on the professional sections of the Taft-Hartley law has been answered by NSPE with a demand that

As Executive Committee Met in Washington

NSPE's Executive Committee met in Washington in mid-June, and the camera recorded one session. Left to right: Executive Secretary Paul H. Robbins; S. L. Stolte, Minnesota; Russell B. Allen, treasurer; President Alex Van Praag Jr.; C. George Krueger, New Jersey; Lawrence Peterson, vice president; Robert Coltharp, vice president; and Samuel I. Sacks, legal counsel.

the professional sections be given a fair test before being judged.

Testifying before the Congressional Joint Committee on Labor-Management Relations, Joseph A. Beirne president of the Communications Workers of America, had stated that the professional sections of the law were causing confusion and might be used by employers to exclude non-professional employees from company-wide bargaining units.

In a sharp retort for the record, NSPE told Senator Joseph H. Ball, chairman of the committee, that Beirne's criticism does not deserve Congressional consideration at this time in the absence of any evidence that the professional provisions have been applied unfairly or arbitrarily. NSPE reviewed the professional cases decided by the NLRB under the Taft-Hartley law and stated they give no indication that the Board will not act judiciously in applying the professional provision and definition.

"If the board abuses the definition of professional employees then it may be proper to ask for Congressional action," NSPE stated.

The joint committee was told that the professional sections of the act have been a welcome relief to the professional employees of the nation, "and as a spokesman for the professional engineers we must resist even the slightest suggestion that Congress acted unwisely in correcting the previously existing discriminations against professional employees."

Oklahoma Society Target

Target of the entire membership committee of Oklahoma Society at the moment is getting Virginia Thompson (right), first woman to become a registered professional engineer in the state, signed up as a member. The campaign started when W. H. Stueve, chairman of the State Registration Board and a member of OSPE, handed the comely Miss Thompson her registration certificate. She had been summoned to the board's headquarters in Oklahoma City, to find upon her arrival that she was the only one who hadn't an inkling as to the purpose of her visit. Even her parents were on hand to witness the ceremony. A graduate of Oklahoma A&M, she is now doing engineering research at the Engineering Experiment station in Oklahoma City. She formerly was with the U. S. Corps of Engineers from the Gulf of Mexico to the Yukon, including a tour of duty along the Alcan highway.

Editorial Comment On Engineers Hit

Flat declaration by the Washington Post in its editorial columns that "most engineers" do not possess executive skill and experience and administrative ability has been challenged by NSPE as "an unfortunate misstatement of fact."

The declaration was made in an editorial in the May 31 edition of the morning newspaper. The editorial was opposing Congressional attempts to oust high Reclamation Bureau officials by providing in appropriation measures that their posts should be filled "by qualified engineers of at least 10 years of experience." The editorial stated that the positions are not of such nature as to require engineering direction, then added that in the paper's opinion technical expertness possessed by engineers would be wasted and in any event engineers were not good administrators and executives.

Executive Director Paul H. Robbins points out in a letter to the Post's management that without entering into the controversy as to whether present officials of the federal agency are qualified, the observation about the executive and administrative ability of engineers is "unwarranted." Declaring that the record shows the profession has contributed "many outstanding executives and administrators in private industry and in government agencies," Robbins' letter points to the successful work of such engineer-executives as Major Gen. Philip B. Fleming, administrator of the Federal Works Agency; Leroy A. Wilson, recently named president of the world's largest corporation, American Telephone and Telegraph; Charles E. Wilson, of General Electric; and Dr. Vannevar Bush, chairman, Research and Development Board, National Military Establishment.

"The unmistakeable trend today is a recognition by large corporations and governmental bodies of the value of the scientifically trained engineer as an administrator and executive," the letter declares. "This trend is particularly noticeable in the foreign countries struggling to recover from the effects of the late war. To improve the effectiveness of the Economic Cooperation Administration, which is to play a lead role in reconstruction of war-ravaged countries, the deputy administrator has been chosen from the engineering profession.

"As a final indication of the injus-

tice of the statement," the letter adds, "we would call your attention to the recent survey, 'The Engineering Profession in Transition,' which shows that more than one-third of the engineers of the nation hold administrative and executive positions. We think you will agree, in view of the above cited facts, that your editorial observation was a conclusion not based on actual circumstances."

Fuller Brush Man Gives Member Advice

A new 10-point formula—developed, incidentally, by a representative of a firm which has gained wide acclaim for its sales techniques—for selling memberships in local chapters, state societies and NSPE has been outlined to members of Pittsburgh Chapter.

A.C. Fox, of the Fuller Brush Company, is responsible for the formula. It entails:

1. Treating the candidate as an individual;
2. Making him feel important;
3. Trying to understand him;
4. Letting him feel he is still independent about joining;
5. Telling him that you appreciate having him as a fellow registered professional engineer;
6. Informing him that he will enjoy the Society;
7. Impressing upon the candidate the security in organization;
8. Letting him know the benefits derived;
9. Giving him all the information you can about the advantages of being a member;
10. After he joins, he will be the most contented man in town.

The chapter has a new secretary in Martin C. Knabe, who replaces Arthur Paulsen, secretary for the past three years who resigned. It also reports loss from its board of directors of Frank W. Edwards, professor of civil engineering at Carnegie Tech, who is leaving his present post to become director of the department of Civil Engineering at Illinois Institute of Technology, Chicago.

Chapter Certificate Session

Engineer-in-training certificates and registration licenses were distributed in the area served by Ohio Northern Chapter at a chapter meeting by a member of the State Board of Registration.

Breathe Easier, Men—

Minnesotan Proves Engineers are People

"Are engineers people?"

That's the blunt question asked by Dr. Richard R. Price, executive secretary of the Minnesota Association of Professional Engineers, in an article in the latest edition of "The Bulletin" of the Minnesota Federation of Engineering Societies.

"They are; they ought to be; they must be!" is the answer Price finds. Here is his reasoning:

1. The U. S. Constitution's preamble begins "We the people" and has no parenthetical declaration "(except engineers)". That means, as he sees it, that all the people of every occupation, trade or profession, from the grass roots to the highest level must participate to the fullest extent if the charter of government is to be workable;

2. The Declaration of Independence, he also points out, refers to "people" without parenthetical references excepting engineers.

3. Lincoln's Gettysburg address, in its famous lines "of the people, by the people, for the people" also contains no parenthetical "except engineers."

Cites Responsibility

From there, Dr. Price develops the hypothesis that since engineers must be considered people, it is particularly incumbent upon them—having the advantages under our free system of higher education, technical training, specialized skills, rich opportunities—to display "uncompromising fidelty" to the high principles enunciated by the three documents.

Instead, he reports, there is a very noticeable and distinct trend among too large a group of engineers to regard themselves as a class apart, not subject to the obligations and responsibilities imposed upon all "the people" by our pattern of social and political organization.

"They are prone to sit in the grandstand watching the struggle in the arena," he asserts, "sometimes with approbation and sometimes with condemnation but not taking any part in shaping the strategy or determining the objectives. This is not to argue that engineers should necessarily enter formal politics, though heaven knows a few more (in politics) . . . would not come amiss.

"Unfortunately, we have narrowed the meaning of the word 'politics'; originally it meant the business of a citizen. Politics in that sense is the business of the engineer as a man and as a citizen.

"Recent history has demonstrated that when large sections of the population cease to participate actively in the direction and control of social, economic and political movements, democracy and popular government tend to wane and ultimately to perish. After that there is no freedom. In politics as in physics, a vacuum invites pressure; if we do not exercise and defend our rights and discharge our duties and obligations, someone else will do it for us."

Twentieth Texas Chapter Gets Charter in July

Twentieth chapter of the Texas Society has been organized and was scheduled to receive its charter at a special program July 12 near Nacogdoches, Tex.

To be known as the Piney Woods Chapter, the new unit will serve Shelby, Nacogdoches, San Augustine, Sabin, Angelina, Houston, Trinity, Polk and San Jacinto counties, according to John J. Ledbetter, executive secretary of TSPE.

Organizational meeting, held at Harris Hotel Courts on Highway 59 four miles south of Nacogdoches, attracted more than 40 registered engineers, and was able to boast an original membership of 22 members and four junior members. July meeting was to see election of a number of additional members. Serving as temporary chairman for the meeting was W. A. Thompson, resident engineer for the Texas Highway Department. He was named temporary president for the chapter.

Trigg Twichell, TSPE president, gave the principal address at the meeting, outlining aims and activities of both TSPE and NSPE. E. W. Pittman, member of the Texas Board of Registration and a member of the Sabine Chapter, also spoke. Others in attendance included O. H. Koch, TSPE 1st vice president; R. B. Cruise, TSPE di-

rector; Ledbetter; and W. E. Simmons, vice president of Sabine Chapter, who headed a delegation from that unit.

Bayo Hopper was named temporary vice president and A. D. Muckleroy temporary secretary-treasurer. Director Cruise of TSPE was to officially present the chapter with a charter at the July 12 meeting.

Monroe Dares Schenectady To Repeat Award Capture

Ink was scarcely dry on the announcement that Schenectady (N.Y.) Chapter had won the NYSSPE president's gavel for the greatest increase in membership before last year's winner, Monroe County Chapter, had dared its successor to "do it again."

In two years time, Monroe County has increased its membership 370% and its numerical rating in the state from 17th to seventh. And chapter officials are determined that "they shall not pass us again."

South Carolina Gets Charter at Meeting

South Carolina Society received its NSPE charter at a colorful dinner ceremony in Charleston.

Presentation was made on behalf of NSPE by Paul H. Robbins, executive director, and received on behalf of the South Carolina Society by King Rouse, president, who served also as toastmaster for the event. Present, too, were Don Beach, president of the Georgia Society, and Alan G. Stanford, chairman of NSPE's Extension Committee, both of whom did extensive ground work in helping organize the society.

In awarding the charter, Robbins told members of "our youngest affiliated society" that NSPE was "looking to youth for leadership" and expected the society to set a pattern of growth and activity in state and national professional matters.

St. Louis Hears Senator

Presidents of 20 engineering societies in St. Louis were invited to a recent meeting of St. Louis Chapter to hear U.S. Senator James P. Kem call for "A Return to Local Self Government." The chapter also is concentrating on clearing up a number of violations of the state engineering registration act.

Air Future Outlook Given Niagara County

At least for the next five years, commercial aircraft will remain at about their present size and speed. But comic strip portrayals of military aviation of the future are not too fantastic.

Those were two observations of Dr. Clifford C. Furnas, director of the Cornell aeronautical laboratory in Buffalo, in addressing the Niagara County (N.Y.) Chapter at a recent meeting which drew a large delegation of local ASME members. While predicting that commercial aviation would remain rather stable in the five-year period, Dr. Furnas did reveal that aeronautical research is working out details of automatic controls capable of reactions quicker than those of the human body. Such development, he asserted, points toward possible war techniques more grim than mankind has ever known.

Officer Change at Northeast

Northeast (Ohio) Chapter has named Victor Kerr president; Frank W. Shelton Jr., vice president; and Richard M. Plummer, secretary-treasurer.

Hartford Members Turn Linksmen at June Meets

It was a case of golf, golf and more golf for members of Hartford County (Conn.) Chapter during June.

The regular chapter meeting found members chasing par—no reports as to the success of the chase were available at press time—at the Indian Hill Country Club, Newington, Conn. A regular tournament was a part of the day's activities, followed by a dinner and business meeting.

At the invitation of the Connecticut Valley Section of the Massachusetts Society, members of Hartford County attended a meeting of the section at Springfield Country Club which included an afternoon of golf, a dinner and an evening business meeting.

Labor Talk Draws Crowd

One of the largest audiences in the history of Anthony Wayne (Ind.) Chapter turned out to hear Leon C. Swager, in charge of labor relations in General Electric's Fort Wayne Works, discuss collective bargaining and the Taft-Hartley law.

Decatur Boasts Three NSPE-ISPE Presidents

Decatur, Ill., has staked a claim to being home of three presidents in the NSPE structure of a national society, member state societies and local chapters, and the city thinks it's achieved something very few communities of its size can match.

First of all, the NSPE president, Alex Van Praag Jr. (center), hails from Decatur. The roster of officers of the Illinois Society lists Earl E. Cooper (right) and he's from Decatur too. And the local chapter serving the area is Central Illinois Chapter, whose president, Walter G. Scherer (left), also hails from Decatur.

Central Illinois Chapter took advantage of the triple-leadership to meet in Decatur to pay tribute to the city, the national and state presidents and its own leader. One of the local newspapers, the Decatur Review thought enough of the story to devote 22 column inches in one of its issues to the story. The other paper, the Decatur Advertiser, spent eight inches telling its readers of the three leaders.

Central Ohio Gets Aluminum Information

Central Ohio Chapter June 9 heard Charles M. Craighead, research engineer at the Batelli Memorial Institute of Columbus, describe advances in the uses of aluminum in the last ten years.

The chapter has broken into print on two other fronts, too. A charter member and past president, H. L. Beecher, suffered serious back injuries when the car in which he was riding was forced off the road by a drunken driver. He's promised to turn out for the August 10 meeting of the chapter in Mt. Vernon. And the chapter's oldest member, John D. Love, a consultant in the telephone field for 52 years, has succumbed at the age of 83.

Mining Insurance Troubles Told Unit

Inflation and curtailment of foreign markets have knocked the props from under insurance issued on coal mining properties.

That was the report given members of the Appalachian (W. Va.) Chapter recently by State Insurance Commissioner David S. Butler when he spoke at a meeting at Beckley. Mine operators have found it extremely difficult to obtain adequate insurance coverage on their properties, he reported, pleading at the same time for improvement of fire protection measures in the state. Many of the fires of the past year would have been controllable, he asserted, if proper precautions—appointment of a responsible person to supervise fire protection, analyzing possible causes of loss, insuring presence of an adequate water supply and training personnel to combat fires—had been taken.

MSPE

(Continued from Page 9)

NSPE member unit could boast a membership of 590 engineers, engineers in training and affiliates. He reminded members that the goal of the society remained unchanged, improving the status of the professional engineer under a keynote slogan of "more for all forever."

L. Morton Reed, vice president of Connecticut Society and eastern zone director for NSPE's Membership Committee, pledged his all-out support to MSPE in its efforts to expand membership. David Chapman, a member of MSPE and a recent appointee to the State Board of Registration, also gave a short address.

City Admits Engineers Know Best—Too Late

Pennsylvania Society has added its "amen" to a recent newspaper editorial that declared "while the suggestions of sidewalk superintendents should never be discouraged, engineering problems should be left to engineers."

The paper, the Sunbury Daily Item, commented on an appeal for federal funds to increase the height of a large section of the flood walls protecting Wilkes-Barre. When the walls were built, the same persons now clamoring for the funds had fought the engineers' suggestion that an extra two feet of height be built into the protective device. Public servants and citizens set up a howl that the two feet would cut off their view of the Susquehanna River.

This past Spring, residents of the town got too good a view of the river. The two extra feet weren't there when they were needed. Now the townspeople are clamoring for the extra protection, and the $750,000 is needed to "correct an error in the public's judgement" that caused opposition to the decisions "of those who by training and experience are best qualified to give the correct answer in such a situation."

Westchester Elects Garfield President, Other Officers

Westchester County (N.Y.) Chapter has put a new top command of officials in control of the NSPE-NYSSPE unit.

Chester A. Garfield is new president; Lloyd C. Medcalf, 1st vice president; Richard M. McLaughlin, 2nd vice president; Raymond Willsea, secretary; William W. Scott, treasurer; and new directors include George A. Noren, Norman S. Odell, Vincent G. Terenzio, Ebbert Pearson, Raymond N. Poole, John J. Balint, Jackson H. Taylor, Max Vogel and John A. Weyant.

Pollution Effort Told

A report on the Pennsylvania sanitary water board's efforts to reduce and eventually eliminate stream pollution was given Lehigh Valley Chapter by L. D. Matter of the board.

Pennsylvania Member Campaign Lags Slightly

A drive to add impetus to the 1,000 new members campaign of the Pennsylvania Society is being launched by Paul White, chairman of the PSPE's membership committee.

In the first four months of this year, 200 new members were added to the roster, whereas 333 should have been added. White is laying plans for sparking the program to make up for the deficit.

Some of the new members are expected to be counted in new chapters being organized. State President Ray Fuller, Gerry Lauter of Philadelphia Chapter, Ralph Heinz of the Reading Chapter and Roy Christman, past state president, have been working to get a chapter formally organized at Norristown, to be known as the Valley Forge Chapter. The "baby" is reported doing nicely.

And William G. Stevens Jr., a member of the Philadelphia Chapter and of the PSPE chapter committee, has taken steps to organize a new chapter to serve Chester and Delaware counties.

When Pennsylvania Society set out to find the answer to why it can't boast of 12,000 members, it polled a cross-section sample of non-members and came up with the answers.

Of the 12,000 who could belong, the survey showed, 2500 don't know the objectives of the Society; 6700 have never been personally requested to join; 7400 don't know any of the officers of the chapter in their locality; 3000 are not members of any engineering society; 7200 are employed by others; 1400 are in private practice; 4800 have never been invited to attend a chapter meeting; 6800 have never attended a chapter meeting; 1900 believe they have no reason for becoming members and 500 intend to join.

Reasons for non-membership include 700 financial; 600 too great an expense; 400 each because of illness, being out of the state or belonging to enough societies; and 300 because of lack of time.

Toledo Elects Officers

Toledo (Ohio) Chapter has named new officers for the coming year. The panel of officials includes William H. Hallauer, president; J. D. Brown, vice president; E. V. Newman, treasurer; A. E. Fryer, secretary (re-elected); and directors, J. H. Toulouse. W. H. Steinhauer and Dr. J. B. Brandeberry.

Redrafting Constitution, By-Laws

Constitution and By-Laws Committee met in shirt-sleeve session in Washington in mid-June to study a welter of proposed revisions of NSPE's constitution and by-laws. Left to right are Executive Director Paul H. Robbins, John F. Hale, Charles S. Larkey, Chairman S. L. Stolte, President Alex Van Praag Jr., and S. I. Sacks, legal counsel.

Charleston Hears Talk On New Type Locomotive

Operation of the new "500" series locomotives being placed in service by the Baltimore and Ohio Railroad was described to members of the Charleston (W. Va.) Chapter at a recent meeting.

Speaker for the occasion was C. F. Cottcomp, assistant director of research for the Bituminous Coal Institute. His talk centered around the coal-fired steam-electric locomotives. Other technical groups in the area joined the Charleston Chapter for the meeting.

New officers named to serve during the coming year include William S. Straub, president; James V. Karrick, 1st vice president; R. W. Haworth, 2nd vice president; H. M. Erskine, secretary-treasurer; and directors, W. D. Kelley, Junius T. Moore, Louis H. Hill and George W. McAlpin.

Ozark-Southwest Meet Together

Ozark (Mo.) Chapter joined forces with Southwest Chapter at Joplin for a meeting that saw showing of an official Army-Navy film on phases of the experimental work with the atomic bomb. A previous meeting of Ozark Chapter also had seen presentation of two motion pictures, one on the application of light steel structural framing in the housing industry and the other on super highways in the United States.

NSPE Committee Chairmen

F. W. L. Hill, Legislative, c/o Potomac Electric Power Co., 10th & E Streets, N. W., Washington, D. C.

Col. M. J. Blew, Membership, 312 Longfellow Apts., 5521 Colorado Ave., N. W., Washington, D. C.

William F. Ryan, Problems of the Young Engineer, 49 Federal Street, Boston, Mass.

Russell B. Allen, Budget, Univ. of Maryland, 4610 Hartwick Rd., College Park, Md.

S. L. Stolte, Constitution & By-Laws, 1437 Marshall Ave., St. Paul, Minnesota

Robert Coltharp, Resolutions, 110 East 10th Street, Austin, Texas.

Alex Van Praag, Jr., Executive, 253 South Park St., Decatur, Illinois.

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James F. Fairman, Inter-Society Relations, 4 Irving Place, New York 3, N. Y.

M. C. Withey, Educational, University of Wisconsin, Madison 6, Wisconsin.

W. A. Hardenberg, Military Affairs, 310 E. 45th St., New York 17, N. Y.

Alan G. Stanford, Extension, 706 Bona Allen Building, Atlanta, Georgia.

Ladies Night Termed Chapter "Event in History"

"An event in the history of the chapter."

That's the description given the Ladies Night program by members of Northern Panhandle (W. Va.) at Oglebay Park Restaurant, Wheeling.

Principal entertainer for the evening was Carl Oberle, hypnotist and magician in his spare time and a professional engineer—holding membership in the Ohio Society—during his working hours. He led several of the guests at the dinner through demonstrations of hypnosis, after first explaining what he intended to do and assuring his subjects that the dangers of being hypnotized were more fanciful than real.

Two N.Y. Members Get Columbia Honor Medals

Two members of the New York State Society received Medals for Excellence in June at the 194th commencement of Columbia University.

One was Richard Erwin Dougherty, who also is president of ASCE, a Columbia graduate of the class of 1901, whose citation credits him with being "an engineer whose sound abilities and executive vision have for many years maintained the flow of transportation along one of the great arteries that bring commerce and prosperity to this city."

The second was William Comings White, electrical engineering graduate of the class of 1912 at Columbia and now a resident of Schenectady, who is cited as a "research engineer, whose inventive mind, concentrated upon the study of electronics, has over the past three decades contributed in many ways to the advancement of knowledge in that field."

Erie Invites Guests

All founder and technical societies and all plant engineering staffs in the area served by Erie (Pa.) Chapter joined chapter members to hear a member of the State Registration Board outline the case for registration and the activities of the agency. Speaker for the dinner meeting, held at the Moose Club, was John M. Rice. Following the meeting, members of Erie Chapter turned their attention to the June 26th annual picnic, at which Ray Fuller, Pennsylvania Society president, was to be a leading speaker.

Marion Given Lowdown On Diesel By Technician

Attention of members of the Marion (Ohio) Chapter was focused at a recent meeting on "Diesel, the Modern Power" with a motion picture and a top diesel expert highlighting the program.

F. Glen Shoemaker, consulting engineer on all phases of the diesel engineering program of Detroit Diesel Engine division of General Motors, was featured speaker. He's been connected with diesel engine development for about two decades, and for chapter members he traced development of the diesel engine from its early days to its present status.

Cleveland Holds Stag

Annual stag of the Cleveland Chapter found more than 100 members and their guests lighting up corn cob pipes, watching sports movies, quaffing several types of beverages, participating in community singing, and generally letting down their hair. The party, in the Embassy room of the Hotel Carter, was arranged by Paul A. Harlamert.

Washington Sets Up Placement Service

Washington Society has established a complete placement service which will function without charge for the mutual benefit of both employer and employe.

Any person desiring the services of a professional engineer, land surveyor or engineer in training for either permanent or temporary work need only submit his request to WSPE, which will then submit a suggested list from its "available" file.

WSPE also has taken steps to "bring some sensible order out of the tangled muddle" of engineer listings in the yellow pages of the telephone books. It has come up with the proposal that each member add the line to his advertisement "Member of Washington Society of Professional Engineers", in the belief that the added designation will stamp the advertiser as of highest caliber.

Chapter Sees Movie

A motion picture, "The Chemistry of Fire," highlighted a recent meeting of Northwest (Mo.) Chapter. The picture was supplied by Standard Oil Co.

Engineering Education Talk Given Southeast

Trends in education of engineering students in the United States occupied the center of attention of members of the Southeast (W. Va.) Chapter at its meeting at Bluefield College.

Program speaker was Prof. George C. Barnes, of the Engineering department at Virginia Polytechnic Institute, who expressed belief that some attempts at introducing courses in engineering curricula would, in his opinion, color engineering training and point it toward radicalism.

The chapter is planning a big program for September, at which members of Appalachian Chapter, local civic clubs and coal operators in the area will be guests. Named to plan the program for the meeting were W. R. Graham, P. K. Pierpont, John Nash, O. G. Crow and William McDougle.

Reading Hears of Utilities

Past, present and future of electric utilities in the state of Pennsylvania were outlined to a meeting of Reading Chapter by A. J. Althouse, assistant to the president of the Metropolitan Edison Company.

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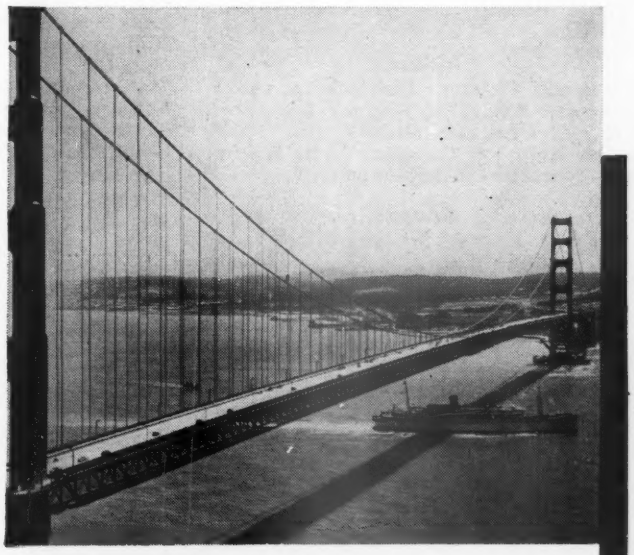

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CAB

(Continued from Page 7)

outgoing mail and freight, travel trends showing "community of interest" between cities to be served, hotel registration figures for the past five years, points of origin and destination of travelers, mail and freight and long distance phone calls.

Examiners' Role

When the formal hearing starts, either in Washington or in the field, trial examiners serve as judges, hearing presentations of evidence, listening to cross-examinations, ruling on points of controversies, etc.

Throughout the hearing, CAB seeks to learn whether the new service will serve a useful public purpose and be responsive to the public need; whether this purpose can and will be served adequately by existing lines and carriers, or whether it must be served by another carrier; whether certification of a new carrier will impair the operations of existing carriers contrary to the public interest; and whether the cost of the proposed service to the government will be outweighed by the benefits to the public.

Two broad phases which appear in the Civil Aeronautics Act and are encountered by applicants seeking authorization to operate an airline are "public convenience and necessity" and "fit, willing and able." The applicant must prove that there is both a present and future need for the air service he proposes to operate. He must also prove that the proposed new route will help develop a sound air transportation system "properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service and of the National Defense." If another carrier is serving the same or nearly the same area, CAB will study the estimated loss of revenue the existing carrier will suffer from the competition of the potential new carrier. That factor will be carefully weighed against the need for the service.

CAB protects existing carriers from unwarranted competition, but favors competition to the extent necessary to assure the sound development of an air transportation system.

If the applicant air carrier passes the test by proving need for the service he proposes (public necessity and convenience), he must still clear the "fit, willing and able" hurdle. The applicant's willingness is proven by his application—his fitness and ability will have to be proven to the CAB's satisfaction.

At the hearing's end, the trial examiner evaluates the mass of testimony introduced by the applicants, then prepares his recommendations to the five-member board. The recommendations designate applicants and routes that he believes to be best suited for the service to be performed. The five-man board then further evaluates all the findings, hears oral arguments supporting or opposing the examiner's recommendations and then hands down its decision.

Next Steps

Approval by the CAB, in the case of domestic carriers, automatically opens the door for issuance of a certificate of necessity and convenience. In the case of foreign air carrier operations, the President also must approve the decisions.

Today's air routes were established very largely for DC3 and even smaller aircraft operation. With the advent of larger type planes—the DC4, DC6, Constellation, etc.—the CAB had had to give very close scrutiny to the effect of use of such craft on non-stop hops on airline competition.

The increased cost of the bigger planes also is causing headaches, financial ones. The new 4-engine planes cost about a million dollars apiece, and their cost must be amortized in most cases in not more than five years. In that fact lies one of the explanations for air transportation's financial difficulties, as compared with other forms of transportation. A pullman car may cost $125,000 new, but it can be used for many, many years and to carry far more passengers on each trip than can a modern plane.

Advances in aviation are coming at a tremendous rate, moreover, and the job of keeping equipment up-to-date and operating safely only multiply the headaches of the air carrier.

Sales Engineering Role Told by Plant

Engineers have demonstrated to the world the way to provide a broader and fuller life and better civilization. That was the plaudit given the profession by Arthur F. Plant, 2nd vice president of Michigan Society and president of Austin Engineers, Inc., when he spoke before a large gathering of University of Michigan students and faculty members at Michigan Union in Ann Arbor.

Plant

And there is a tremendous field for the engineer to apply his background of technical education and broad and practical engineering experience to the sales field, he added. The effective and successful salesman is not an order taker, he asserted, but a person who, by virtue of his qualifications, is capable of handling his client's needs and advising him as to his needs so that equipment or supplies purchased will have maximum efficiency, flexibility and productivity.

Maumee Ladies Night Hears Glass Discussion

Better halves (actual or prospective) of the membership of Maumee Valley (Ohio) Chapter were honor guests at a ladies' night program at the Barr Hotel in Lima.

In addition to a dinner, the distaff side heard a description of the mechanical, chemical, electrical, thermal and optical properties of something they use every day in housekeeping—glass—from Harold G. Vogt, Corning Glass Works, Corning, N. Y. It was the first time in the history of the chapter that such a ladies' night program had been held, but President Daniel H. Stouffer says members feel it shouldn't be the last.

Indiana Sets Goal

New member goal of the Indiana Society has been set at 100 members, and from all appearances the goal is going to prove modest. Seventy-five applications for membership already have been approved, putting the NSPE member at the three-quarter mark with nearly half the year left.

Airport Drainage Project

One of the basic problems in building any airport is insuring adequate drainage. Workmen are shown on a federal aid project in this CAA photo installing drainage facilities.

Wisconsin Member Gets Engineer of Month Honor

"Engineer of the month."

That's the designation given a member of the Wisconsin Society, Samuel J. Gates, Wauwatosa, by the Engineers' Society of Milwaukee. Gates, who has specialized in power engineering, has been in private practice since 1916, six years after graduation from Syracuse University. At present he is a partner in the engineering and architectural firm of Gates, Moe, Weiss & Papenthien, which was organized in 1945.

Extremely active in civic affairs in the Milwaukee area, Gates has served on Wauwatosa's grade crossing separation committee, board of tax review, water committee; has been an officer and director of the City Club, Red Cross, commander of a Legion post and president of the Family Welfare Association of Milwaukee. That's why his advice on civic participation by engineers is extremely timely.

"One hears much these days," he suggests, "about the importance of engineers concerning themselves with community affairs. Up to a certain point this is a matter of duty and the broadening effect and other incidental benefits to the individual make such activities worth while.

"However, they should be chosen with discrimination and with due regard for the minimum effectiveness of one's spread. It is well to learn to say 'no' as well as 'yes' and to try to direct one's outside activities along lines not too far removed from the main objective."

Cleveland Offers Two Reasons for Attendance

Attendance at meetings of the Cleveland (Ohio) Society last year averaged 125 persons per meeting, but the unit's 1948 officers—Thompson F. Hindman, president; Ray A. Freese, vice president; John O. Barrett, secretary; Fred Gaub, treasurer; and Sol. A. Bauer, historian—have launched a campaign to improve on that figure.

They've asked members to attend meetings for one of two reasons—1) as is the case with the ladies' groups, attend because others may talk about you in your absence; or, 2) as is the case in medical and legal profession association meetings, attend because good judgment indicates something new can be learned from each session.

Wisconsin Readies Directory

Public relations committee of the Wisconsin Society has begun compilation of a new directory of its members.

Conveyors in Mining Studied by W. Va. Unit

Utilization of conveyors in mining operations was outlined to members of Fairmont (W. Va.) Chapter at its latest bi-monthly meeting, with C. W. Thompson, development engineer of the Weirton Steel Company serving as speaker.

He described operation of a new 6,000-foot-long conveyor, the largest ever to be installed in a mine, that will carry coal from cleaning plant to river dock at the rate of 10,000 tons per three working shifts. Its operation requires only one man, he said, almost eliminates haulage accidents, and has additional advantages of near-complete freedom from interruption, freedom from grade restrictions and of saving power.

The conveyor is being installed in a mine operated by Weirton in Monongalia county.

New Engineer Hirings To Drop, Survey Shows

Company executives report their firms will hire only 89 per cent of the number of engineers they added to the payrolls in 1947.

That's the report of Dr. Frank S. Endicott, director of placement at Northwestern University following a survey of American business firms. He found, incidentally, that the percentage requirements for new personnel from the ranks of college graduates is 97 per cent of last year's requirements.

Rolla Tours School

First-hand inspection of the Metallurgical Engineering department's facilities at the Missouri School of Mining and Metallurgy was made by members of Rolla Chapter recently. The chapter program, in addition to the tour of the school facilities, included an address by Dr. A. W. Schlechten on the present status of the branch of the profession. Dr. Schlechten led the tour and gave demonstrations of mineral dressing, extractive process metallurgy and physical metallurgy.

Albany Hears Bridge Talk

Plenty of nostalgic memories were aroused by a recent meeting of the Albany County (N.Y.) Chapter at which colored photographs of a nearly extinct American landmark—covered bridges—were shown.

Four Ohio Chapters Pioneer in Insurance

"Old stuff."

That's what four member chapters of Ohio Society of Professional Engineers are telling the state unit as it enthusiastically prepared to put its group insurance program into effect.

The four — Cleveland, Franklin County, Zanesville and Mahoning Valley—all had the group insurance program in effect when the state moved to give its members protection throughout Ohio.

Chapter Studies Overtime

Champaign County (Ill.) Chapter is circulating a questionnaire among its members on overtime payments. Chapter officials hope to learn if and how overtime is paid and how members feel about payment of overtime to professional engineers.

Chapter Courts Kiwanians

Northeast (Ga.) Chapter is taking seriously—with good results—the suggestion that engineers ought to pay a little court to various civic groups. In a meeting at Toccoa, the chapter furnished a program for a meeting of the local Kiwanis Club, and attendance stood at 150 persons. Don Beach, GSPE president, has been a recent speaker before the chapter.

Atlanta Telephones

Atlanta (Ga.) Chapter reports great success in the efforts of its telephone contact committee to drum up larger attendance at unit meetings. Headed by Mason Mower, the committee functions on the idea that an individual telephone call to a member informing him of a chapter meeting is a lot harder to overlook that a postcard which must be filled out and mailed. Initial trials indicate the system can be responsible for attendances in excess of 100 persons.

Chapter Plans Dance

To give the "little woman" a chance to see what attracts her spouse to meetings of Westchester County (N.Y.) Chapter, the chapter held repeat performance of last year's dinner dance. The event was so planned as to let the distaff side feel they are a part of chapter's activities. Sherry Tribou was chairman of arrangements for the program.

Wisconsin Seeks 150 More Members in Year

Membership committee of the Wisconsin Society has set as its goal addition of 150 new members, which will boost total state membership to approximately 850.

Quotas have been set for each chapter, and the committee's budgeted funds have been apportioned to each chapter on the basis of the potential memberships represented by the nonmember registered engineers residing in the area each chapter serves.

Meeting of the committee which drew up the coming year's program attracted H. T. Rudgal, chairman; Southeast Chapter; O. O. Egger, Fox River Valley Chapter; S. R. Snead, Milwaukee Chapter; and W. G. Youngquist, Southwest Chapter.

Memberships Get Steaks

Getting new members is a paying proposition for members of the Harrisburg (Pa.) Chapter. As is evidenced by the fact that J. D. Carpenter, past president, recently provided a "steak dinner" to all members of the chapter who had obtained three or more new members during 1947.

Pennsylvania Aims High

A 1948 membership drive goal of 1,000 new members has been set for the Pennsylvania Society, Vice President Paul White, chairman of the state membership committee, has announced.

Seeks More PE Plates

Action to obtain a larger assignment of automobile license plates bearing the designation "P. E." has been launched by George Barrows, executive secretary of the New York State Society. While the state's plans for 1949 license plates are not complete, Barrows is taking steps to be in on the ground floor when the plans are announced.

Kewanee Proposes Plan

Kewanee (Ill.) Chapter has proposed to the Illinois Society creation of special machinery for handling wage adjustment disputes between employers and employees. No arbitrary representation group is envisioned, but rather an available panel of disinterested members would be organized to sit with any groups which might be called upon by the state society for such aid.

Kings Hears Funk

Kings County (N.Y.) Chapter heard the chairman of the public relations committee of New York State Society, Harold H. Funk, discuss a plan of progress for engineers at a recent meeting. The same meeting also heard detailed reports of delegates to the 21st annual convention of NYSSPE.

Akron Gets Lesson

How the public relations section of a large corporation operates, and how its practices can be employed in promotion of the profession of engineering, was outlined to members of Akron (Ohio) Chapter by George A. Bowie of Firestone Tire and Rubber Company's PR department.

Chapter Hears of Patents

A touch of humor was introduced at a meeting of North Central (Ohio) Chapter when an attorney-engineer, A. H. Oldham, was main speaker. A member of Akron Chapter, Oldham discussed famous and funny patents.

Indiana Hears of Aviation

With the director of the state aeronautics commission as its guest speaker, Indiana Society focused its attention at its June meeting upon aviation in the state. Col. C. F. Cornish was speaker. Date for the annual meeting of ISPE has been set for Dec. 11 at Claypool.

Seattle Studies Changes

Latest quarterly meeting of Seattle (Wash.) Chapter brought long discussion of needed changes in the constitution and by-laws of the Washington Society. The discussion was led by J. O. Johnson, chairman of the committee, to obtain grass roots opinion on the changes needed.

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Harrisburg Informed Of Air Mapping Details

Harrisburg (Pa.) Chapter members got some new slants on aerial photography and mapping at its last meeting from three officials of a Philadelphia concern which does that work.

Speakers at the dinner meeting, held at Vans Colonial Restaurant, were from Aero Service Corp. C. M. Hodell, vice president, reported that during the late war the corporation made maps of Leyte and European landing areas six months in advance of actual military operations. George Hess described how the firm had mapped the Pennsylvania Turnpike extension in 145 contract days, even though work was handicapped by the fact that leaves didn't fall from the trees last Fall until late in December. And Captain Canfield showed colored motion pictures of winter hunting of coyote and caribou from airplanes in the Dakotas and in Canada.

Two More Pennsylvania Chapters Hear Ray Fuller

Two member chapters of the Pennsylvania Society have heard State President Ray M. Fuller at recent meetings.

Midwestern Chapter honored him with a big turnout at Sharon in a special "president's night" meeting. And Johnstown Chapter drummed up another good attendance for his appearance before that chapter at a meeting in Windber.

N. Y. Explains to Students

Educational committee of New York State Society again this year furnished a licensed professional engineer to meet with senior engineering students of all engineering schools and colleges in the state to explain requirements of licensing and registration. The project was carried out under the direction of Education Committee Chairman William W. Perry.

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